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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/210,055 12/11/98 MILLER

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EXAMINER

HAVAN, T

ART UNIT

PAPER NUMBER

2672

DATE MAILED:

02/13/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/210,055

Applicant(s)

MILLER, JOHN DAVID

Examiner

Thu-Thao Havan

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 20 is/are allowed.
- 6) ☐ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

Art Unit: 2672

DETAILED ACTION

Response to Amendment

1. Claims 1-20 are pending in the present application.
2. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tannenbaum et al. (US patent no. 5,720,020).

1. As to claims 1-19 the prior art Tannenbaum had:
 - A.) A method comprising modulating the transparency of an image of an object as a function of an angle of incidence of a vector normal to a viewing surface at the surface of the object (**col. 1-4; col. 7, lines 13-44; fig. 3B-8**). As in the specification of the present application (in reference to page 2, lines 24-25), the Applicant defined the modulating of transparency as varying the transparency over the range. Applicant specifically gave the example of transparency of an image can vary from opaque to clear. Tannenbaum teaches modulating the transparency of an image when he discloses the ranges of the

Art Unit: 2672

images as being occluded to visible. Furthermore, Tannenbaum teaches an image of an object as a function of an angle of incidence of a vector normal to a viewing surface at the surface of the object when he discloses the mathematical method of using the cosine formula to figure out the angle of viewing for the images. Additionally, figures 4-5 and 7 illustrate the stated claim by showing the calculation of refracted images.

B.) The function comprises a linear function, a non-linear function, and a cosine function (**col. 1, lines 62-67; col. 2, lines 12; fig. 4-7**). Tannenbaum teaches the measurement of the transparent angle by the cosine as illustrated in figures 4 and 6. As for linear and non-linear, Tannenbaum obviously teaches the linear function in his formula of the cosine function and the non-linear in the triangle.

C.) The computer-readable medium comprises a memory (**col. 3, lines 49-55; fig. 1-3**). Tannenbaum teaches this part of the claim when he discloses the generating of graphics images of objects in relations to computer graphics systems.

However, Tannenbaum fails to explicitly teach word modulating. Nevertheless, as in the specification of the present application (in reference to page 2, lines 24-25), the Applicant defined the modulating of transparency as varying the transparency over the range. Applicant specifically gave the example of transparency of an image can vary from opaque to clear. Tannenbaum teaches modulating the transparency of an image when he discloses the ranges of the images as being occluded to visible. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the word "modulating" because Tannenbaum teaches the images as being occluded to visible (**col. 1-4; col. 7, lines 13-44; fig. 3B-8**).

Art Unit: 2672

Allowable Subject Matter

Claim 20 is allowed.

The following is an examiner's statement of reasons for allowance: Examiner searching for the step assigning a function of $\theta - \pi$ to α if the mode is back_only and comparing α to zero, in combination with the other elements of the claims, was not disclosed by, would not have been obvious over, nor would have been fairly suggested by the prior art of record. The dependent claims being further limiting to the independent claim, definite, and enabled by the Specification are also allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sullivan, US Patent No. 6,100,862

Hill, US Patent No. 6,144,382

Takeuchi, US Patent No. 6,141,061

Joshi et al., US Patent No. 5,982,381

O'Connor et al., US Patent No. 5,638,499

Art Unit: 2672

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu-Thao Havan whose telephone number is (703) 308-7062. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (703) 305-4713. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-5359 for regular communications and (703)308-5359 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9500.

Thu-Thao Havan

February 5, 2001



MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600